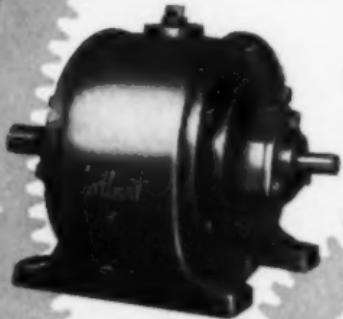


Hitchcock's Machine Tool Blue Book

NOVEMBER, 1932

TWENTY-SEVENTH YEAR

Abar^t Gears and Reducers



Speed
Reducers
of all
types
—
Motorized
or
Standard



We manufacture gears of all types and materials.
Rush Orders Solicited—Quality and Service Guaranteed
NO ORDERS TOO LARGE OR TOO SMALL

Abar^t

Gear & Machine
Company
4835 W. 16th St., Cicero, Ill.
—LAST WORD IN GEARS—

PUBLISHED AT 508 So. DEARBORN ST. CHICAGO

More Than Your Money's Worth!

A "Delta" Drill Press . . .
Built Like \$75 . . . Operates Like \$75 . . . and Offered at the Remarkably Low Price of

\$29.90

Complete with belt and motor pulley
($\frac{1}{2}$ " bore). Motor Extra.

MODEL 970 has very heavy cast-iron head, with motor mounted at rear, avoiding jack shaft. Four speeds, 590, 1,275, 2,450 and 5,000 R. P. M. Sturdy V-belt drive (belt full $\frac{1}{2}$ " wide); no slipping, no loss of power. Built to run at speeds up to 12,000 R. P. M.

Spindle runs in New Departure high-speed ball bearings. Heavy, solid steel quill, accurately graduated and provided with "quick-set" adju-table pointer for convenience in depth gauging. Adjustable stop rod and nuts for automatic depth gauging anywhere within the travel of the spindle. Spindle travel, 4".

Machine drills to center of 14" circle, and takes drills up to $1\frac{7}{32}$ diameter. Table can be dropped a distance of 43" from spindle, giving machine enormous capacity. The diameter of the column is a full $2\frac{3}{4}$ " and the overall height of the machine is 68". Table is 10" by 10" in size. Floor space is 18" by 24" and shipping weight 125 lbs. Inter-changeable spindles available; one with Jacobs' chuck.

Head can be swung to one side to serve as a radial drill for odd-shaped work, and it can be lowered to within a few inches of the floor for low, heavy work. For further details send for Special Drill Press Circular DP900.



Delta Mfg. Company
3779 North Holton Street
MILWAUKEE, WISCONSIN

Hitchcock's
**Machine Tool
Blue Book**

Selected
Circulation

Over 25,000
Monthly

NOVEMBER, 1932

TWENTY-SEVENTH YEAR

**Action
and
Economy**

ADVERTISERS want action, without having to pay too much per act.

But don't get the idea that advertising will do everything. It won't sell snowballs at the North Pole, or heating plants on the Equator, or machines that were out of date when Washington crossed the Delaware.

But if you make a machine or tool for which there is a real need in metal-working plants, prepare copy which states clearly why people should buy it, place your advertisement in the BLUE BOOK, and you will get more action for the cost than from any other medium on earth.

A good machine, clear copy, and the BLUE BOOK—that assuredly is an unbeatable combination for a maximum of action with real economy.

*Before you forget, get in touch with
the publishers today, and try it out.*

Published By

**Hitchcock Publishing Co.
508 S. Dearborn St., Chicago, Ill.**

Consult the Classified Finding Index for your requirements

FOOTBURT



A Single Spindle Footbur Sipp Sensitive Drill

Made in three
sizes of single
and multiple
spindle models

More holes with this machine

Why? Because you can change speeds in two seconds or belts in ten seconds—because the automatic idlers keep the belt pulling to capacity at all times—because the full ball bearing equipment and accurate machining gives a smooth, fast cut.

Write for No. 650 Folders

The Foote-Burt Company, Cleveland, O.

FOOTBURT

NOC-OUT

Automatic Roll Feeds For Punch Presses Speed Production

Secure automatic feeding with its many advantages for your punch presses by installing the NOC-OUT Automatic Reversible Feed. This small unit automatically feeds metal, paper, brake lining or any other stock from coils in lengths from 0 to 30 inches per stroke of press.

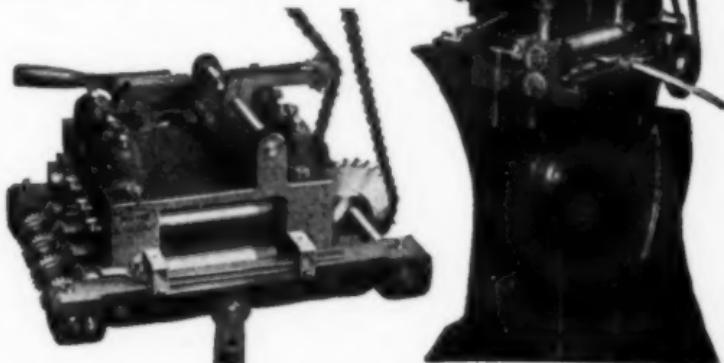
FASTER — ACCURATE — ECONOMICAL

Labor is saved, production is increased and your men safeguarded with this feed. Automatic feeding means full speed production all day long —there are no "let downs" as it eliminates the human element whose energies are limited. Can be readily installed on any press.

We will gladly send you a copy of Bulletin "H"
describing NOC-OUT Automatic Roll Feeds.
Write for it and details of Our Free Trial Offer.

We design and build progressive and automatic dies for high speed production. Submit samples of your stamping for estimate.

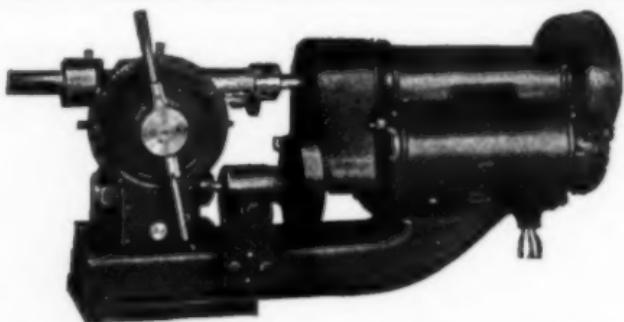
Wittek Mfg. Co.
4309 W. 24th Place,
Dept. "H" CHICAGO, ILL.



THE VALUE OF A TOOL DEPENDS ON WHAT IT WILL PRODUCE.

The Cost of Finished Work is the
Real Consideration.

HOW GOOD--HOW FAST?



MEN

who expect Quality work expect to pay a
Quality price, rather than to think **only**
in terms of "how much."

ARE YOU INTERESTED

**in GOOD DRILLING—
GOOD TAPPING ?**

We have Tapping Attachments as well as Built-in Tappers
and a full line of Motor Units and Drilling Machines.

ALL ARE QUALITY TOOLS.

**THE AVEY DRILLING MACHINE CO.
CINCINNATI**

KRW Hydraulic and Sensitive ARBOR PRESSES

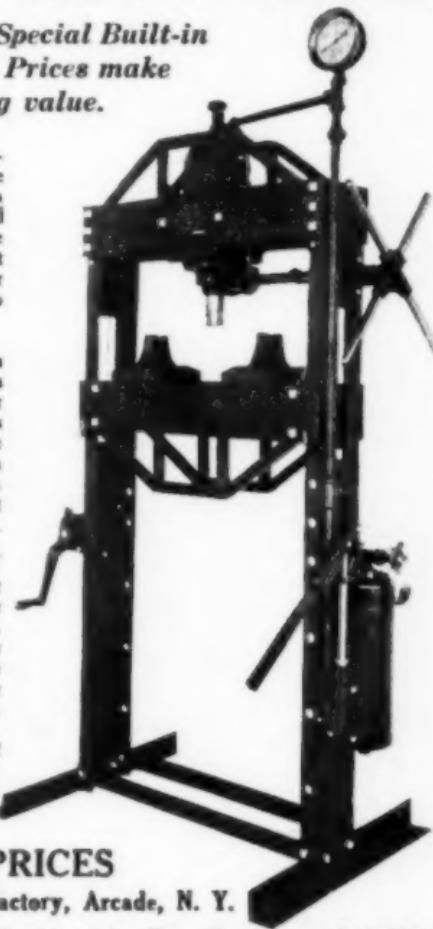
New Improvements, Special Built-in Features and Lower Prices make them an outstanding value.

THE last word in convenience, efficiency and ease of operation. Built extra strong and well braced with steel trusses electrically welded, these presses will withstand strains that would cause presses of lighter and inferior construction to buckle or collapse.

Hand wheel for sensitive press operations has sliding handles which pull out to the ends for increased leverage. Work does not have to be changed from the work table as is the case with other make presses having a separate sensitive press unit mounted on the side or elsewhere.

The importance of this KRW feature as a time and labor saver can be appreciated. Also there is NO EXTRA CHARGE for this important built-in feature on a KRW Press. Worktable can be raised easily with one hand. A strictly one-man Press.

Write for special circular, just off the press, giving full details and specifications of all KRW Arbor Presses.



PRICES

F. O. B. Factory, Arcade, N. Y.

No. 37—35 ton Hydraulic and Sensitive Arbor Press (hand operated)	\$128.00
No. 37B—35 ton Hydraulic and Sensitive Arbor Press (air-oil operated)	128.00
No. 37E—50 ton Hydraulic and Sensitive Arbor Press (hand operated)	150.00
(Can also be furnished in air-oil operated at same price)	
No. 37F—70 ton Hydraulic and Sensitive Arbor Press (hand oper. only)	275.00
Gauge and fittings, \$15.00 extra on all presses.	

K. R. WILSON

10-16 Lock Street, Buffalo, N. Y., U. S. A.

EXPORT DEPARTMENT
126 Liberty St., New York

WEST COAST BRANCH
722 Mateo St., Los Angeles



DEPENDABLE

—ELCO— SCREWS

REDUCE ASSEMBLY COSTS



Uniform High Quality



Care and precision, backed by modern production methods is your guarantee that Elco screws will meet your most exacting requirements on both the quality and price basis. Their uniformity will result in speedier and better assembly.



MACHINE SCREWS
MACHINE SCREW NUTS
WOOD SCREWS
LAG SCREWS
CAP SCREWS
PIPE PLUGS



*Write or Wire For
Samples and Prices*



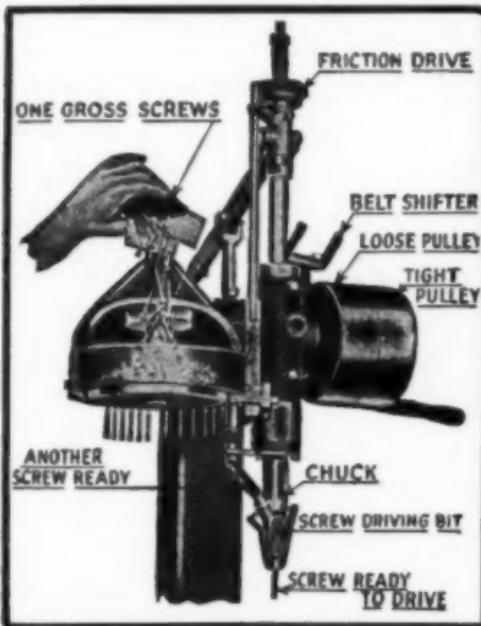
ELCO TOOL & SCREW
CORPORATION

1808 Broadway, Rockford, Ill.

"It Pays to Use Good Screws"



Better—More Uniform—Work



Showing Magazine Feed of the Reynolds Automatic

*Can be
Secured with
Decided
Savings
in Costs
by using
the
Automatic
MAGAZINE
FED
Reynolds
*Screw
Driving
Machine**

HUNDREDS of plants, the country over, are using the REYNOLDS as a means to reduce their costs of production. The automatic magazine feed aids in shaving off 60 to 85% in time and labor costs as compared with obsolete hand methods of driving screws. It also increases the value of the product because of the uniformity and quality which it guarantees. If you are not using this money saving machine it will pay you well to investigate.

*Write, giving dimensions over all of your work, length
and gauge of screws used, and we'll send figures
showing the savings you should
effect with a REYNOLDS*

The Reynolds Machine Company

Dept. H. H. Massillon, Ohio

"THE MODERN WAY TO DRIVE SCREWS"

**CONVENIENCE AND ECONOMY
ALONG WITH PRESTIGE . . .**



"I'm stopping at the Gibson." That means something in Cincinnati. And the central Fountain Square location of this famous hostelry means shorter distances by automobile or taxi . . . you'll save money! Just across the street from city bus terminal and Dixie Terminal, the gateway to Kentucky . . . closer to most street car lines than any other hotel. 1,000 rooms, each with bath; 70% of all rooms at \$2.50, \$3, \$3.50 and \$4 . . . Garage.

C. C. Schiffeler - Managing Director



The Greater
HOTEL GIBSON
CINCINNATI

Grind Fast—New Hand-ee Grinder Touch Off — Dress Up — Sharpen

Use it at the bench—or take it to the job. Works on A. C. or D. C. Just plug in and grind—10,000 r.p.m. on 110 v. A. C.

Gets into the hard-to-get-at places. Use wherever you have to touch off a part, pattern, mold, tool, or die, or to grind little holes, open or blind, straight or formed. Handy for sharpening tools or dies in place.

Fits the hand— $4\frac{1}{2}'' \times 1\frac{1}{8}''$. Weighs 1 lb. Grinding wheels on shanks available in 100 shapes. Three shapes sent free. Mark the three you want on bottom cut.

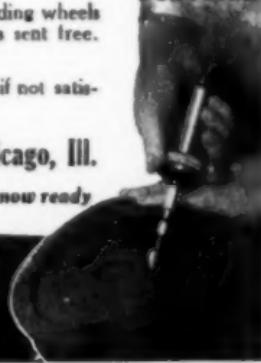
Order direct or from your supplier. Money back if not satisfactory in five-days trial. Order today.

M. C. TOOL CO., 116 S. Aberdeen St., Chicago, Ill.

Ask for new catalog "Grinding Wheels on Shanks" now ready.

FREE
TRIAL
SEND
TODAY
\$10.00
POST PAID

100 SHAPES AVAILABLE



STANDARDIZATION PAYS



SPEED REDUCERS

ALL TYPES
FOR LIGHT AND
HEAVY DUTY IN
STOCK FOR

TYPE V (TIMKEN EQUIPPED)

IMMEDIATE SHIPMENT

SEND FOR CATALOG

BOSTON GEAR WORKS SALES CO.
NORTH QUINCY, MASS.

BOSTON NEW YORK PHILADELPHIA CLEVELAND CHICAGO

BOSTON GEARS

VISE

For DRILL PRESS

Often used on
Miller, Shaper, Planer
6", 9" and 12" Jaws

With Jig Attachments much
duplicate drilling without special Jig coat.



Fig. 2
Without Jig
Attachments

KNURL HOLDER



Swivel Lugs

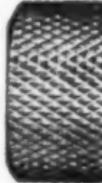
Shank made
to suit Turret

For Turret Lathes

Operates like Screw Die
Adjustable to any size
within its capacity.

TWO SIZES — TWO STYLES

Straight Cut Knurls in
Swivel Lugs Produce
all Standard Knurling.
Send for Circulars



**THE GRAHAM MFG. CO., 78 Willard Ave.
PROVIDENCE, R. I.**

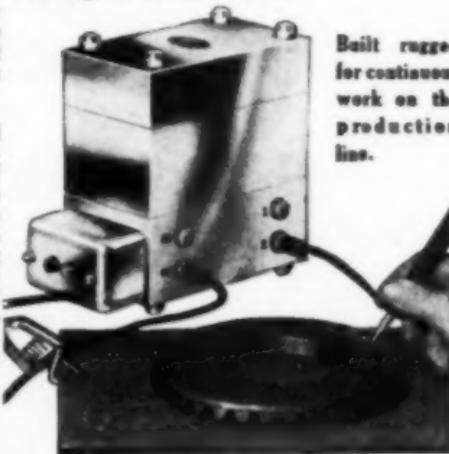
For Light and Heavy Etching

With 24 Stages of Control.

The LUMA Master Etchtool fulfills every marking requirement that can be done by an electric Etching outfit.

A Production Tool with as many as 24 different stages or varieties of control for regulating the depth of marking, this tool can be used for extra light marking of machinist scales, micrometers and fine tools or can be used for *extra heavy and deep* marking of rough and unfinished iron, cast iron, forgings, steel plates, etc.

Send for circular giving complete data and details of this modern instrument.



Built rugged
for continuous
work on the
production
line.

LUMA ELECTRIC EQUIPMENT CO.
DEPT. H.—Main P. O. Box No. 132—TOLEDO, OHIO

ORDER FROM THEM WITH CONFIDENCE

A machine or tool that is advertised today is a machine or tool in which prospective purchasers may well place their confidence, for only reliable products can be profitably advertised during these times. It will pay you, therefore, to read and study the messages of the following manufacturers who are advertising in this issue:

Abart Gear & Machine Co.
American Tool Works
Anderson Bros. Mfg. Co.
Armstrong-Blum Manufacturing Co.
Armstrong Bros. Tool Co.
Atlas Press Co.
Avey Drilling Machine Co.
E. A. Baumbach Mfg. Co.
Boston Gear Works Sales Co.
Burke Machine Tool Co.
Cleveland Twst Drill Co.
Defiance Machine Works
Delta Manufacturing Co.
Eisler Electric Corporation
Elco Tool & Screw Corporation
Etco Tool Co.
Excelsior Tool & Machine Co.
Foote-Burt Company
J. C. Glenzer Company
Graham Manufacturing Co.
Grant Mfg. & Machine Co.
Illinois Testing Laboratories, Inc.
T. H. Lewthwaite Machine Co.
Luma Electric Equipment Co.
M. C. Tool Company
J. E. Martin Tool & Die Works
Procnier Safety Chuck Co.
Reynolds Machine Co.
Schwerdtle Stamp Co.
Siewek Tool Company
N. A. Strand & Co.
Sunstrand Machine Tool Co.
Thompson Grinder Co.
Walls Sales Corporation
The Walton Co.
Western Tool & Mfg. Co.
Whitney Metal Tool Co.
K. R. Wilson
Wittek Manufacturing Co.

Get in touch with these progressive manufacturers when in need of
DEPENDABLE PRODUCTS.

**No. 20
BALL BEARING
PUNCH**



Capacity, $\frac{1}{2}$ " thru $\frac{1}{2}$ " iron.
Weight, 20 lbs.

**No. 455
COMPLETE
ANGLE-IRON
UNIT**



Capacity
 $2\frac{1}{2}'' \times 2\frac{1}{2}'' \times \frac{1}{4}''$
angle iron
Weight, 225
pounds.

SPEED

Notches, Cuts,
and Bends $2\frac{1}{2}'' \times \frac{1}{4}''$ Angle
Iron in One
Minute Flat.

Write for Catalog and Price List on Entire Line

WHITNEY METAL TOOL COMPANY
95 FORBES ST., ROCKFORD, ILL.

LOW-COST TAPPING!



**The Procurier
High-Speed Tapper**

Converts your drill press into a sensitive tapping machine at the cost of a few dollars.

Over 2000 R. P. M.

Our brand new friction tapper (illustrated) is reversible, has a "double cone" cork clutch, and can be driven over 2000 R. P. M. on many jobs. We also manufacture positive drive tools for slower work.

Take advantage of our free trial offer.

Send for circular giving complete information and prices.

PROCUNIER SAFETY CHUCK CO.
14 S. Clinton St., Chicago, Ill.

"ALNOR" Pyrometers

for the
Hardening
Furnace

MODEL 223

Inexpensive, yet accurate and durable, the ALNOR Pyrometer is used by large and small shops everywhere for heat-treating work. Because of its low first cost and compact size it is also very popular for soft metal melting, galvanizing, die casting, japanning, enameling, measuring flue gas temperatures and many other purposes.



Write for descriptive folder

Illinois Testing Laboratories, Inc.
150 W. Austin Ave., Chicago, Ill.

MARKING DEVICES

RUBBER STAMPS



STEEL STAMPS



BURNING BRANDS



ETCHED METAL NAME PLATES



BRASS LABELS



THE SCHWERDTLE STAMP CO.
BRIDGEPORT, CONN.

INDUSTRIAL REHABILITATION

By

W. A. ROBERTSON

*Chairman of the National Committee on
Industrial Rehabilitation.*

*Chairman of the Board, Westinghouse
Electric and Manufacturing Co.*

Capital expenditures by manufacturers and industry in general for the rehabilitation of their plants and the replacement of obsolete and worn-out equipment, at this time would be helpful in many ways. It would help unemployment. It would also cost less now.

Business is basically justified in spending money now for rehabilitation and modernization. Reserves in the Federal Reserve Banks, beyond what they are required by law to maintain, are above \$300,000,000. Potentially such reserves suggest the basis for expansion of bank deposits, or, on the other side of the balance sheet bank loans and investments, of approximately \$3,000,000,000. In the past, large excess bank reserves have produced credit expansion. In the coming months, as confidence returns, and as funds are required by business, it is natural to expect that the law of credit expansion under like circumstances will work and that these excess funds will be put to use. Additional excess reserve is seen in our increased gold supply from abroad. The overall effect will tend to raise prices and to stimulate business generally.

Historically there is a national relationship between the use of bank credit on the one hand and business activity and prices on the other. Therefore, it is fair to assume that, barring unforeseen events, we are coming into a period of business activity and advancing prices.

The questions which men of affairs should ask themselves are:

Have we arrived at the period when we should set our respective business houses in order in preparation for an early business revival? Or stated differently: Have we arrived at the period when the country has been sufficiently deflated to make a concerted effort to start business in the other direction not only advisable, but absolutely necessary? It seems clear to me that the answer to this question should be "Yes." The work can be done to greater advantage now than later because of the favorable prices of labor and material.

MORE PRODUCTION

With Higher Speed, Less Spoiled Work, Fatigue or Broken Taps



ETTCO

High Speed-Sensitive
TAPPING
ATTACHMENT

MULTIPLE SPINDLE TAPPING HEADS
With complete engineering service.

FIVE SIZES—UP TO ONE INCH TAPS

Try Ettes at Our Expense. We have a nice New Circular ??

ETTCO TOOL CO., Inc., 594 Johnson Ave.,
BROOKLYN, N. Y.

This cut shows our
Rapid Clamping
Drill Jig — tooled
complete for drilling
a large hole in a Ford
steering knuckle.



*Send for our
new catalog
No. 3 showing
the different
set ups of our
drill jigs.*

SIEWEK TOOL COMPANY
2345 Walcott St., Ferndale, Michigan

ARMSTRONG

TRADE MARK REGISTERED U.S. OFFICE

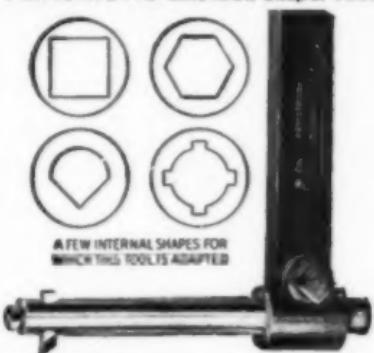
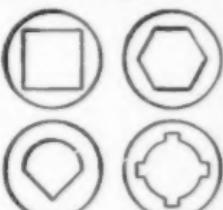
TOOL HOLDERS

Cut Costs on Every Operation on Lathes, Planers, Slotters and Shapers.

No matter what the job there is an ARMSTRONG Tool Holder that will do it, that will do that operation and many others and will save "All Forging, 70% Grinding and 90% High Speed Steel" on all. Keep up with the Armstrong System of Tool Holders—

Write for Catalog B-27

ARMSTRONG Extension Shaper Tool



An extremely rigid tool adapted to die work, internal keyways — wherever extra clearance is needed.



ARMSTRONG BROS. TOOL CO.
"The Tool Holder People"
308 N. Francisco Ave., CHICAGO, U. S. A.

1905 *Strand* 1932 ROTARY FILES



HIGH SPEED
STEEL
—
HAND CUT
—
ROTARY FILES
USED WITH
STRAND
FLEXIBLE
SHAFT
MACHINES
ARE GIVING
WONDERFUL
RESULTS

N. A. Strand & Co.
5001-09
No. Lincoln Street
CHICAGO

VANDERBEEK UNIVERSAL JOINTS



Are used in all kinds of machines where high grade Joints are needed. The very highest grade of workmanship goes into our Joints.

We specialize on Joints

for instrument work and light drive as well as airplane use. Hundreds of thousands of Vanderbeek Universal Joints are in daily use.

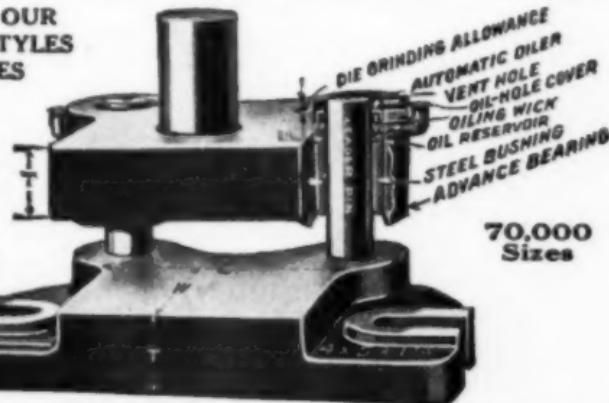
Write for Prices and State Your Quantities

American Tool Works, Inc.
25 High St., Hartford, Conn., U. S. A.

Automatically Oiled Die Sets

ONE OF OUR
MANY STYLES
AND SIZES

SEND FOR
DIE SET
GUIDE
AND
CATALOG



E. A. BAUMBACH MFG. CO.
GENERAL OFFICE AND WORKS
1810 South Kilbourn Ave., CHICAGO, ILLINOIS

Sales and Engineering Offices—Principal Cities U. S. A. and Canada

Abolish Expensive Hand Finishing

with a



Simplex-M Abrasive Band Grinder

This Grinder accelerates production and cuts costs. Hand emerying or filing operations are antiquated in comparison. The use of this new modern machine assures straight grain finishes with sharp edges. *Details of this and other styles and sizes on request.*

**WALLS SALES CORP., 96 Warren Street
NEW YORK**

**Let Your Losses Stop
with the Broken Tap**

Don't halt production and pay skilled mechanics to dig it out, often injuring the work.

A Handy Walton Tap Extractor

Will forestall these unnecessary losses. Insert its flutes into the broken tap, twist the end—an apprentice can do it in a jiffy—and the tap backs out without injury to the threads.

Made in three and four flute styles.

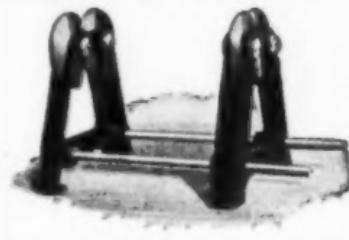
Let us send it to you for a sixty-day free trial



The Walton Company

302 Pearl St., Hartford, Conn.

Anderson Ever Ready
Exceedingly Sensitive



Balancing Ways

Easy to Manipulate

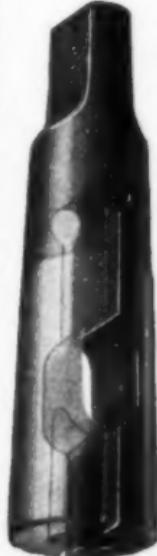
Made in six sizes to balance anything that revolves from a crank shaft to a 24,000 lb. turbine rotor. They require no special leveling, no adjustment, and no centers.

Equipped with glass-hard spindles, chilled steel discs, and especially sensitive ball bearings, to give accurate, long time service.

"Swing"	20°	40°	60°	72°	96°	72°
Greatest distance bet. standards.....	20°	30°	30°	66°	88°	20°
Capacity in lbs.....	1000	2000	2000	5000	10000	24000
Approx. shipping weight.....	45	90	150	350	650	
Code	Bend	Bid	Bis	Bib	Bes	

Anderson Bros. Mfg. Co.
1915 Kishwaukee St., Rockford, Ill.

The Utility Sleeve Detachable Taper Shank



Use one with all your straight shank tools, and you will discover a new field in tool economy.

Simply insert the shank of a drill or reamer into its sleeve, and the "Utility" works as positively and efficiently as a solid taper shank tool.

The substantial saving is obvious. It eliminates expensive chucks and when the tool is worn or broken you merely discard the straight shank tool, not the whole taper shank tool.

*Glenzer tools establish economy —
send for circular*

The J. C. Glenzer Co.
6469 Epworth Boulevard
DETROIT, MICHIGAN

"Champion" Emery Wheel Dresser

Outlasts a Dozen Cheaper Dressers

The "Champion" is made by experts, for long life and the best service. The only dresser that runs in an oil bearing.



The most economical dresser you can buy. Cutters are made of the best grade of tool steel, milled and heat-treated and tempered —fully guaranteed. Get the complete details on this cost saving tool.

Write for Catalog also describing Champion Tool Holders, Expanding Mandrels, Vises, Clamps, Shop Furniture, Etc.

**The Western Tool & Mfg. Co.
SPRINGFIELD, OHIO**

This Publication

Over 26 years ago this publication began advertising the products of reliable manufacturers to the metal-working trade. It is mailed regularly each month to every worthwhile prospective buyer of machinery, equipment, supplies and services in the industry. In the 26 years it has been published, millions of dollars worth of merchandise has been purchased by its readers.

Those who receive this publication regularly read it and respond to its advertising messages. Thousands of plants use it as a buying guide. We believe we sell more products per dollar of advertising than you can obtain in any other way. It is precisely the one medium that can produce profitable results for its advertisers at a reasonable cost.

Rates, circulation and other data on request

**Hitchcock Publishing Co.
508 So. Dearborn St., Chicago, Ill.**

Actual Riveting Results

Are Most Convincing



Send us samples of your most difficult work, in close corners or out-of-the-way places, let us rivet them on the—

GRANT NOISELESS SPINNING RIVETER

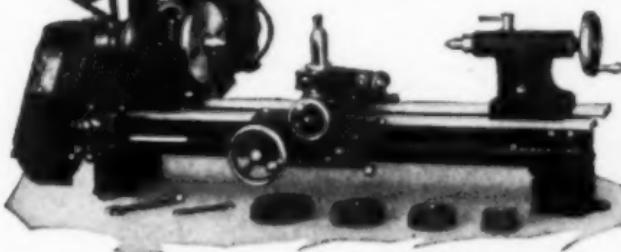
—and we will return them, with time and cost estimate.

The GRANT produces highly polished heads, without hammer or tool marks. Speed: a rivet a second. May be operated by unskilled labor—and it's *noiseless*.

Write for Catalog—and don't forget to send that sample!

**The Grant Mfg. & Machine Co.
C. E. Station, Bridgeport, Conn.**

COMPLETE \$79⁰⁰
as shown
less motor



.... a **REAL** lathe, quality built, quantity priced. 18" between centers. Swing over bed 9", over carriage 6". A complete unit. Price includes all gears to cut 4 to 32 threads per inch; compound rest, tool post, wrenches, drive belts, everything shown in picture

except motor. Guaranteed satisfaction or money back. Accurate to 1/1000". Strongly built. A real **BARGAIN**. Send for circular

ATLAS PRESS CO.
1850 No. Pitcher St.
KALAMAZOO, MICHIGAN

BURKE FOR FAST MILLING—

This No. 3 Burke Bench Miller is one of a line of five ranging in price from \$125 to \$315. Like the other Burke machines of this type, it is designed to speed up and economize the milling of work too small to be profitably handled on larger floor model machines—and it does its job well.

Hand feed with high carbon steel spindle. All parts are carefully balanced to insure smooth operation and accuracy.



No. 3
\$155.

WRITE FOR CATALOG WITH ALL DETAILS

THE BURKE MACHINE TOOL CO.
297 E. 16th St., - Conneaut, Ohio, U. S. A.

THOMPSON
12"x36"
Universal



Saves
Time
and
Money

For All Kinds of GRINDING

Plain, edge, die, surface, cutter and reamer, and internal—and good at all of them. Efficient, accurate, dependable.

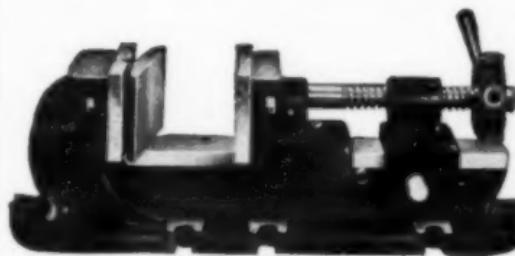
Work adjusts to a fixed grinding wheel, an exclusive feature that's better.

All standard machines equipped with auxiliary independent coarse cross feed for surface grinding.

The Thompson
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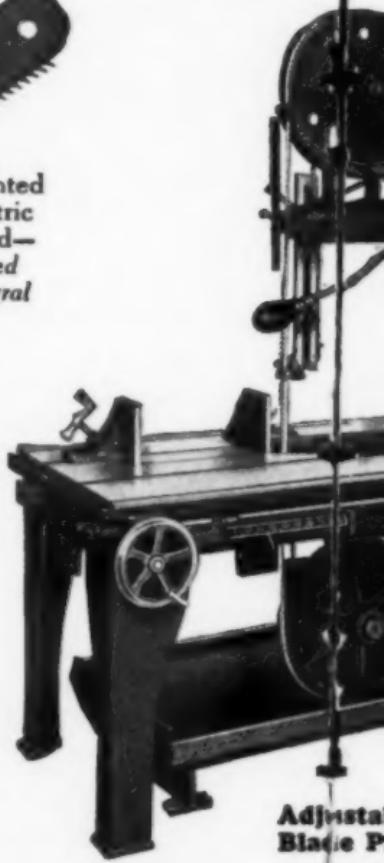
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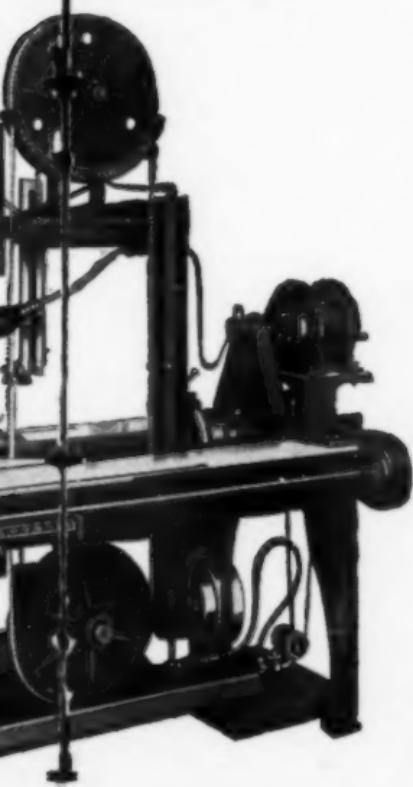
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Die sinker, No. E-3 Keller, m. d.
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Drill, h.s. 14" Canedy-O., 1750 r.p.m.
Drill, 21" Rockford, tap. att. m. d.
Drill, radial, 2 $\frac{1}{2}$ " Fosdick, t. a., b.d.
Drill, radial, 3 $\frac{1}{2}$ " Cin.-Bickford, s.p.d.
Drill, radial, 4" Prentice, t. a., b. d.
Drill, radial, 6" Dreses, s. p. d.
Flanger, McCabe, $\frac{1}{2}$ " capacity, dies.
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Gear cutter, spur, 36"x10" Newark.
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Grinder, centerless, No. 4-C Detroit.
Grinder, internal, No. 70 Heald.
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Lathe, 16"x6' Le Blond, q. c. g., d.b.g.
Lathe, 20"x8" Hendey, tie bar, t. a.
Lathe, 24"x16' Bridgeford, g. hd. m. d.
Lathe, 48"x26' Bridgeford, g. hd. m. d.
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Drill, 24" Prentice, sliding head.	Planer, 42"x42"x26" Wheeler, 2 hds.
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Grinder, 30"x162" Landis, m. d.
Hammer, No. 6N Hazel, motor dr.

Hammer, 2000 lbs. Chambersburg.
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Lathe, 23"x20' LeBlond, belt drive.
Lathe, 36"—60"x32' McCabe, belt.
Lathe, 60"x36' Bridgeford.
Pipe mchs. 2, 4, 6, 8 & 12" belt & m. dr.
Punch, No. 3 Southwark, cap. 4x4.
Shear, 84" Newbold, 4" cap., 27" gap.

FOR SALE BY

Brown Machinery Co.,

2333 N. 9th St., St. Louis, Mo.

Drills: 24", 26" and 32" Barnes and Rockford; 4-spindle Moline.
Grinders: No. 6 Besly dbl. spindle;
No. 220 Badger auto. disk; 12x30"
Modern, plain s. c. c. s.; No. 12
Brown & Sharpe, universal, tool.
Hammer: 40 lb. Bradley, helve.
Lathes, 30"x12" Blaisdell; 26"x12"
Putnam; 20"x10' Bradford, taper
attachment; 16"x8' Lodge & Shipley; 16"x6' Monarch; 12" and 14"
Seneca Falls, q. c. g.

Millers, No. 2 Hendey-Norton, univ.;
No. 3 Fox; No. 4 Hendey Lincoln;
No. 3 Kempsmith, universal.
Press, No. 7 Zeh & Hahneman,
Nos. 1, 3, 4 Loshbough Jordan.
Punch, Cleveland C 4 in 4"; Rock
River Style L 4" in 4".
Shaper, 24" Ohio.
Shear, 50" 10 ga Excelsior gap.
Shear, No. 25A Quickwork, 4" cap.
Threaders: 4" Geometric; National
4" double head.

Write for prices; send us your inquiries for shop equipment and sheet metal
working machinery. We have the stock.

PLANT LIQUIDATION

We just purchased the following equal to new tools which we are liquidating from New York plant. Mostly push button AC motor drive bought within last five years.

MACHINE TOOLS

Grinder, No. 50 Heald Cylinder.

Millers, No. 20 Van Norman Duplex, AC, M. D., serial 9938, divid. hd., vise.

" No. 2M Cincinnati Univ., grd. hd., s. p. d., bought Oct. 1927.

" No. 1½B Special Milwaukee Univ., grd. hd., s. p. d., double overarm.

" No. 2 Cincinnati Univ. serial, cone.

" No 2 Brown & Sharpe, grd. hd., plain, double overarm.

Lathes, 18"x9" Lodge & Shipley, AC, motor drive, serial 25157.

" 14"x6" Rockford, grd. hd., AC motor drive, taper attachment, drawing-in chucks, equals new.

" 14"x6" Lodge & Shipley, cone, t. a., serial 22505.

" 9"x4" Seneca Falls, q. c. g., drawing-in attachment, collets.

" 9"x18" Stark No. 4 Precision, Drawing-in attachment.

Turret Lathe, No. 4 Warner & Swasey, grd. hd., AC motor drive, serial 238696.

Grinders, 8" Black & Decker, pedestal base, 1 phase, 60 cycle, 110 volt.

" 6" Black & Decker, pedestal base, 1 phase, 60 cycle, 110 volt.

" 7" & 10" Black & Decker, pedestal base, 1 phase, 60 cycle, 110 volt.

Machinists Vises, 150—All Sizes and Types.

SHEARS, BRAKES, ROLLS

Shears, 6'x10 ga. Niagara No. 672, 15" gap, AC motor drive, equals new.

" 52"x18 ga. Pexto No. 152C Foot.

" 36"x18 ga., Pexto, Foot.

" 30"x14 ga. Niagara M/D.

Brakes, 8'x3/16" Robinson, Leaf, M/D.

" 8"x14 ga. Chicago, No. 814, Hand.

" 4"x12 ga. Chicago, No. 412, Hand.

Rolls, 42"x2½" Niagara, Geared, Floor Base.

POWER PRESSES

No. 21B Bliss, Flywheel, geared AC, M/D, built 1929.

No. 21 Bliss, Flywheel, geared AC, M/D, built 1928.

No. 19 Bliss, Flywheel, geared AC, M/D, built 1928.

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30 Church St.,

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New and Used Wood-Working Machinery

For a large list of new and used wood-working machinery, consult **Wood-Working Machinery**—a monthly publication similar to this, but devoted to the advertising of wood-working and saw-mill machinery and allied equipment.

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4" AJAX TWIN GEARED OVERHANGING SLIDE UPSETTING and FORGING MACHINE, Low priced if purchased before moving to our warehouse.

PRESS BRAKE: 8'x $\frac{1}{4}$ ", M. D. tie rod.

UPSETTING AND FORGING MACHINES: Ajax, Acme and National from $\frac{3}{4}$ " to 7", some only two years old.

HAMMERS: Bradley Upright—50, 100, 150, 200, 300 and 500 lb.
Bradley Cushioned Helve—40, 60, 100 and 200 lb.

BOARD DROP HAMMERS: 800, 1000, 1200, 2000 and 2500 lb.
Chambersburg.

SHEARS: Bar and Guillotine, 1 $\frac{1}{2}$ ", 2 $\frac{1}{2}$ ", 3 $\frac{3}{4}$ " and 5" round.

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Adriance Inclinable, weight 5000 lbs. Assortment of inclinable presses from No. 1 to No. 6.

PUNCHES: Single and Double End, various capacities & throat depths.

PUNCH AND SHEAR: Triple Combination, All Steel.

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THREADER: 3" LANDIS Single Spindle with Lead Screw.

NIPPLE THREADER: Landis 2" 2-spindle, M. D.

PIPE THREADERS: Landis 6"; Saunders 4"; Jarecki 6".

FURNACES: No. 65 American Gas, No. 152 and 154 Rockwell Rotary.

MULTIPLE PUNCH: Williams White Double End 225 ton capacity.

$\frac{5}{8}$ " and 1" NATIONAL SEMI HOT AUTOMATIC FEED HEADER.

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FORGING AND TAPERING ROLLS.

GRINDERS: Double Disc, some motor drive.

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DRILLS: No. 30 Natco Multiple, No. 3 Bausch Multiple, 6 Spindle ROCKFORD Gang Drill with quick return; 2 Spindle Hoefer Rail, capacity 3".

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Bolt, nut and rivet machines; cold and hot headers; cold punch and hot pressed nut machines; trimmers; thread rollers, automatic threaders; vertical and bent tappers; pointers; hammer headers, etc.

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Specialists in Forging, Bolt, Nut and Rivet Machinery

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wght 78,000 lbs. latest type, m. d.
No. 206B Toledo gap bed, d. c., grd.
No. 19, 20, 21 Bliss, o. b. i.
No. 1, 3 Consolidated, o. b. i.
No. 90E, 91D, 92B Toledo, dbl. crk.

SHAPERS

- 16^o, 20^o, 24^o, 28^o G. & E., c. p. dr.
24^o, 28^o G. & E., single pulley drive,
24^o American, single pulley drive,
25^o Smith & Mills, cone pulley drive.

All shapers back geared crank.

MISCELLANEOUS

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Boring Mills, Bullard 24^o, 36^o, 42^o New Era, m. d.; 24^o, 36^o Rapid prod., s. p. d.
Bolt Cutters, 1^o, 1½^o, 2^o Landis, single and double spindle types.
Centering Machine, D. E. Whiton, belt drive.
Chain Hoists, ½ to 5 ton capacity.
Hammer, 50 lb. Bradley Strap, belt drive.
Hammer, 60 lb. Bradley Rubber Cushioned Herve, belt drive.
Keyseater, No. 5 Mitts & Merrill, belt drive.
Presses, 15, 30 and 50 ton Lucas Power Forging, belt drive.
Punch and Shear, No. 16A Badger Single End, belt drive.
Riveting Hammers, No. 3A, 3A H. D., 5A High Speed, belt drive.
Shear, No. 2 Badger Alligator, belt drive.
Slotted, 15^o Niles-Bement-Pond, belt drive.
Square Shear, 132^o D. H. Stoll Power Gap, 14 ga., belt drive.
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Lathe Chucks and Vises, all sizes

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36^o x 20^o Bridgeford, Geared Head.
27^o x 16^o American, Grd. Hd., m. d.
36^o x 18^o Lodge & Shipley, cone head.
30^o x 14^o Lodge & Shipley, cone head.
26^o x 24^o Niles, cone head.
24^o x 16^o Lodge & Shipley, cone head

- 24^o x 12^o American, Geared Head.
20^o x 20^o American, Geared Head.
20^o x 10^o LeBlond, cone head.
20^o x 8^o Hend-y, Geared Head, m. d.
19^o x 10^o LeBlond, cone head.
18^o x 8^o Boye & Emmes, cone head.
18^o x 8^o American Grd Hd., taper att.
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No. 2 Cincinnati Univ., cone pul. dr.
No. 3 Kempamith Univ., cone. pul. dr.
No. 3 Ohio Univ., cone pulley drive.
No. 2, 3, 4 Cinc. plain, single pul. dr.
No. 1½BS, 2B, 2BS, 3B Milwaukee
Pl., sgl. pul. & m. d., dbl. overarm.

- No. 5 Cinc. pl., rect. overarm, m. d.
No. 1½B, 2½B Milwaukee vert. m. d.
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No. 3, 4 Cincinnati vert., sgl. pulley dr
18^o, 24^o, 48^o Cin. Pl. Dup. & Auto.
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6^o x 14^o & 6x80^o P. & W. Thread.

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No. 2 Brown & Sharpe Auto. Sur.
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18x96^o Norton Plain Cylindrical, b. d.
No. 51 Bealy, M. D. Disc., A.C. mtr.

- No. 8, 12, 14, 120 Gardner Disc. b. d.
60^o Springfield Auto. Face, belt drive.
84^o Diamond Auto. Face, belt drive.
10x36^o Landis Plain Self-Con. Cyl.
No. 60, 65, 70, 75 Heald internal.

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High Grade Machine Tools

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54" x 24" H. S. & G. Grd. Hd. M. D.
42" x 24" American Grd. Hd. late type.
24" x 22" Bradford, Q. C., 3 S. C. D.
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46" x 18" N. B. P., Qk. Ch., H. D.
46" x 16" H. S. & G. Grd. Hd., late type.
24" x 12" L. & S. Patent Grd. H. S. P. D.
30" x 10" Lodge & Shipley, 3 S. C. D.
D. B. G. Q. C.
20" x 8" Am. Grd. Hd., M. D., late t.
18" x 8" Reed-Prentiss Grd. Hd. Q. C.
20-30" x 7" Monarch Helical G. H. Gap
16" x 6" Lodge-Shipley Sel. Grd. Hd.
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Nos. 55, 60, 65 and 70 Healds.
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12" Pratt & Whitney Surface.
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No. 2 Brown & Sharpe Surface.
No. 3 Brown & Sharpe Universal.
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Grinder, complete equipment.

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overarm, late type.

18-H Gould & Eberhardt Hobber.

6", 11", 18" Gleason Gear Generators.

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1/2" Landis Double-Spindle.
1 1/2" Landis Sgl.-Sp., Grd. Hd. m. d.
1" Acme Class "A" Single-Spindle,
2" Landis Sgl.-Sp., lead screw attach.
2" Landis Double-Spindle.
6" Outer Pipe Machine, motor drive.

Boring Mills

24", 36" and 42" Bullard "New Era"
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60" Niles Boring Mill, 2 heads.

No. 32 Giddings & Lewis Horiz.

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No. 4 Cincinnati H. P. Pl. S. P. D.
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No. 2-B Milwaukee Plain, Double
Overarm, Rapid Traverse.

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CINCINNATI, OHIO

Nos. 3; 5-B; 6 Becker Vertical.
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Plain. S. P. D. flange nose.
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Feeds; brand new.
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24" x 24" x 8" Gray Planer.
27" x 27" x 8" Woodward & Powell.
36" x 36" x 10" Gray, 2 heads.
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Radial and Upright Drills

4" and 5" American Triple Purpose.
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20" Gould-Eberhardt, High Duty.
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24" Cinti. h. d. mtr. dr. thru gear box.
28" G. & E. hi. duty, S. P. D. thru g. b.

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25 ton Henry & Wright Dieing Mche.
50 ton Henry & Wright Dieing Mche.
80lb Bradley Cushion Helve Hammer
Nos. 0 and 3 Baker Keyseaters.
Nos. 1 & 2 Davis Keyseaters.
6 spindle 9/8" Acme Nut Tapper.
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No. 43 Robinson Dbl. Crank Geared
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Wickes Punch & Shear, 48" throat,
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PRESSES: Inclinable, Solid Back, Straight Sided, Plain, Short and Long Stroke, from No. 0 Bench to No. $5\frac{1}{2}$. A total of 38.

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COMPLETE DROP HAMMER SHOP: 800, 1500 and 2000 lb. Chambersburg Board Drop Hammers, with Trimming Presses.

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BLAKESLEE Combination Washer, Tumbler, Burnisher and Saw Dust Dryer.

COMPLETE AUTOMATIC PLATING EQUIPMENT with Generators, Burnishing Barrels, etc.

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Power 2nd cap. cold pipe bend. mach.
72nd N. B. P. Bor. Mill 2 sw. hds. m. d.
5th Prentice Radial Drill, belt drive.
4th Cin-Bickford, gear box, s. p. d.
Libby M. D. 7½th H. S. late type lathe.
42nd x 24th Geared Hd. American Lathe.
S & B dbl. spdl. 24-42nd x 14th bed lathe.
21nd x 8th LeBlond q. c. g. lathe.
No. 4½ Standard Miller T & L pul. c.s.
200 & 500 ton Hydraulic Presses.
1100 lbs. single frame Steam Hammer.

10th x 1½th S. E. Bending Roll, low price.
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10th Garrison Pwr. Brake, cap. 16 ga.
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16th G. & E. & 32nd Cin. m.d. Shapers.
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42nd x 36th x 10th D. & H. openside planer.

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All makes and sizes.

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SURFACE GRINDER** with ball
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chuck - - - - \$525.00

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15—Geared Head Motor Driven Lathes, sizes 14"x6' up to 24"x12'.
3' and 4' new and nearly new Radial Drills.
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60"x48"x28' Cincinnati Motor Driven Planer.
32"x18' and 24"x6' Gray Planers.
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3½" Universal Horizontal Boring, Milling and Drilling Machine.
Shapers, Gear Hobber, Gear Shaper, Drills, No. 2 Mills & Merrill
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Good Will, Patterns, Finished Product, Jigs and Complete Business
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Also the Schaffner 11" Lathe Line, representing over \$60,000 invest-
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- 1—60"x60"x20' Gray Planer, motor drive, 2 cross heads, 2 side heads.
- 1—Niles Floor Type Boring Mill, motor drive, 20 h.p., A.C., 4½" bar, 120" height, 100" travel.
- 1—Dill Slotter, 22" stroke, motor drive.
- 1—30" Colbourn Boring Mill, cone type.
- 1—42" Bullard, Vertical Turret, two heads on rail, belt drive and countershaft.

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Detroit Gray Iron Foundry Co.
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10⁸ Betts Vertical, rapid traverse,
grd. feeds, motor dr., 3-motors.
36⁸ Bullard, New Era, M. D.

24⁸ Bullard, New Era, M. D.
3½⁸ bar Universal, Horizontal.
No. 40 Landis, floor type, M. D.

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No. 12 Natco Multiple Sp., M.D.
No. 1 Avey, 2-Sp., BB, power fd.
24⁸ Cincinnati sliding head, T.A.

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4⁸ American, pl., gear box, m. d.
6⁸ American, plain, motor on arm.
6⁸ American, pl., gear box, m. d.

SHAPERS

No. 14 Cochrane-Bly Univ., s.p.d.
15⁸ Potter-Johnston, Universal.
24⁸ Milwaukee, cone.

PLANERS

24⁸x24⁸x7¹ Cincinnati, Tu-Speed
48⁸x36⁸x10¹ Cincinnati, mtr. dr.
48⁸x48⁸x26¹ Cincinnati, mtr. dr.

MILLING MACHINES

No. 2 Brown & Sharpe, plain.
No. 2 Cincinnati, H. P., S.P.D.
No. 3-B Milwaukee, DOA, m.d.

No. 1-M Cincinnati Univ., s.p.d.
No. 2-A Brown & S. Univ., m.d.
No. 3 Brown & S. Univ. R. T.

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New 3 Phase Motors at Low Prices

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14 ⁸ x6' Monarch, quick change.	17 ⁸ x 8' LeBlond, quick change.
16 ⁸ x8' Hamilton, quick change.	24 ⁸ x14' LeBlond.

TURRET LATHES and SCREW MACHINES

Automatic, National-Acme. 1½ ⁸ cap. Smurr & Kamen.	2 ⁸ x24 ⁸ and 3 ⁸ x36 ⁸ J. & L. 1 ⁸ Pratt & Whitney.
--	--

SHAPERS

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Baugh No. 1, multiple spindle. 32 ⁸ Hoefer, sliding head.	6' ceiling. 44 ⁸ Stover sensitive.
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No. 1½ American plain. No. 25 Becker plain.	18 ⁸ Cincinnati automatic. No. 5 Becker vertical.
--	---

MISCELLANEOUS

Band saw, Clark, compound. Band saw, Napier 10 ⁸ x10 ⁸ . Gear miller, No. 1 Bilton.	Sand Blast, Boland. Shear, Loy & Nawrath 3½ ⁸ cap. 10 ¹ . Shear, Pettingell, 60 ⁸ throat.
---	--

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OSBORNE & SEXTON
MACHINERY COMPANY
COLUMBUS OHIO**

You Will Save Money—

By Selecting Now from Our Large Stock

- 1—S. 154 Ferracute double crank, double geared, twin drive press, A. C. motor, 14" stroke, 74" between uprights, Marquette air cushions. Like new.
- 4—No. 102 Consolidated double crank inclinable presses, each with 2 H. P., A. C. motor, two never used.
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- 1—8A Bliss dbl. crank tie rod frame, dbl. grd., 30 H.P. A.C. motor.
- 1—No. 426½ Hamilton double crank geared press, 8" stroke, 10 H. P., A. C. motor.
- 12—No. 5 Loshbough Jordan geared inclinable presses, 4", 5", 5½" str.
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- 1—No. 3 Ohio cutter and reamer grinder, A.C. motor and equipment.
- 1—No. 2 Walker tool room grinder, with equipment.
- 1—14"x72" Norton plain grinder, with countershaft.
- 1—No. 1½B Milwaukee vertical miller, rotary table.
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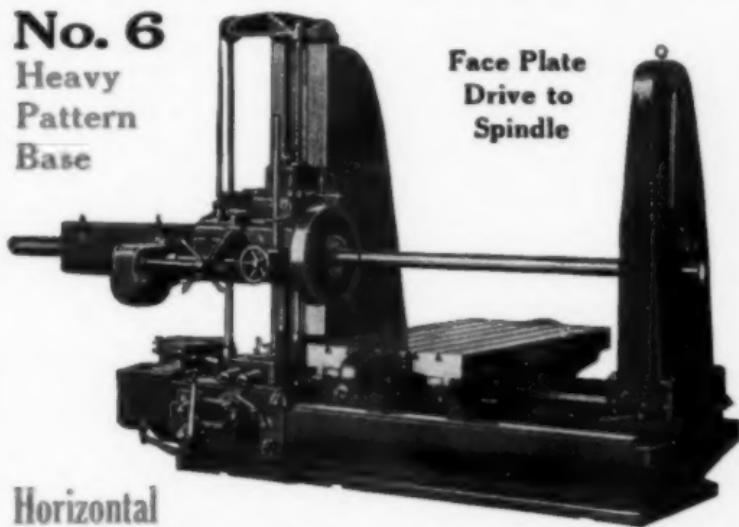
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